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## **ABSTRACT**

The multiple view angle X-ray stereoscopic imaging method of the present invention comprises the steps of: first, establishing the angle and distance indexes for all the pixel columns of a series of projected image data acquired along circular or spiral trace based on the X-ray imaging system parameters and data acquisition parameters, and sorting and storing the indexes so as to be retrieved fast; then, calculating the angle and distance parameters of pixels in the stereogram to be combined according to the selected observation viewpoint, direction of sight line, and parallax effect, and thereby looking up the stored indexes and the corresponding image data and implementing image combination. The method of the present invention provides a multiple view angle X-ray stereoscopic imaging display which can designate the position of viewpoint and direction of sight line, and adjust the parallax effect, thereby enabling examiners to implement interactive examination of stereoscopic X-ray images and to understand better the spatial structure of the examined object.